DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

G05CE
Revision 1
Alexander Schleicher, GmbH
ASW 27

March 31, 2003

TYPE CERTIFICATE DATA SHEET No. G05CE

This data sheet, which is part of Type Certificate No. G05CE prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Alexander Schleicher GmbH & Co.
Segelflugzeugbau
D-36163 Poppenhausen
Germany

1. Model ASW 27 Glider, Utility Category, approved January 30, 1997

		mph	km/h	knots
Airspeed Limits (IAS).	V_{NE} (never exceed)	177	285	154
	V_B (in rough air)	134	215	116
	V_A (maneuvering)	134	215	116
	V_T (Aero-tow)	106	170	92
	V_W (Winch launch)	81	130	70
	V_{FE} (Wing flaps extended)			
	(WK1)	177	285	154
	(WK2)	177	285	154
	(WKA)	134	215	116
	(WK3)	124	200	108
	(WK4)	112	180	97
	(WK5)	112	180	97
	(WKL)	93	150	81
	V_{LO} (Landing Gear operating)	115	185	100
	Airbrakes	177	285	154

V_{NE} Speed limit High Altitude:

Altitude MSL meters (ft.)	V_{NE} IAS km/h	kts
< 2.000 (6,562)	285	154
< 3.000 (9,843)	280	151
< 5,000 (16,404)	247	133
< 7,000 (22,966)	221	119
< 9,000 (29,528)	197	106
< 11,000 (36,089)	172	93
< 12,000 (39,370)	159	86

Center of Gravity (C.G.) Range: 8.27 in to 12.6 in (210 to 320 mm) aft of datum

Empty Weight C.G. Range: Reference Alexander Schleicher ASW 27 Maintenance Manual, Section 6.4, Figure 6.4-1 Diagram of Empty Weight C.G. Position, dated January 20, 1997.

Datum.: Wing leading edge at wing root rib

Leveling Means.: Slope of rear top edge of fuselage 1000 : 54 horizontal

Maximum Weight.: 500 kg (1102 lbs).
Maximum permissible mass of non-lifting parts 280 kg (617 lbs)

Minimum Crew: One pilot

No. of Seats.: One Seat

Maximum Baggage.: The baggage compartment is limited to 15 kg (33 lbs.).

Control Surface Movements.: Aileron at flap setting 0 degrees:
Up -0.83 ± 0.16 in. (-21 ± 4 mm) (17.3 ± 3.3 deg)
Down 0.35 ± 0.08 in. (+9 ± 2 mm) (+7.4 ± 1.6 deg)
Distance from Measuring Point to Pivoting Axis 2.76 in. (70 mm)

Elevator: Up/Down ± 0.79 ± 0.08 in. (-20 ± 2 mm) (±20 ±2 degs)
Distance from Measuring Point to Pivoting Axis 2.24 in. (57 mm)

Rudder: ±5.9 ±0.39 in. (±150 ± 10 mm) (±31 ±2 degs) to the right and left.
Distance from Measuring Point to Pivoting Axis 11.0 in. (280 mm)

Weak Link: Ultimate strength — For winch tow 1455 lbs. (660 daN); For aero tow 1445 lbs. (660 daN)

Serial Nos. Eligible.: See Import Requirement

Certification Basis.:

1. Airworthiness Requirements:
Based upon the provisions of 14CFR 21.17(c) and 21.29, the following airworthiness requirements are applicable to this design and form the certification basis:

1.1 Code of Federal Regulations (CFR), 14CFR21, Effective February 1, 1965, Amendments 21.1 through 21.71.

1.2 “Joint Airworthiness Requirements (JAR) for Sailplanes and Powered Sailplanes”, JAR-22 through Change 4, issued June 27, 1989 including amendments dated 22/90/1, 22/91/1, and 22/92/1; and the following requirements

from FAA Advisory Circular 21.17-2, dated July 13, 1989:
22.177(b) Including AC 21.17-2 para. 6.c.(6)(i)(d)
22.1545 Including AC 21.17-2 para. 6.c.(6)(iii)

1.3 Exemption No. 4988 to 14CFR45, Effective April 20, 1964, Amendments 45-1 through 45-16, section 45.11(a) and (d) "External Identification plate".

1.4 14CFR91, Effective September 30, 1963, Amendments 91-1 through 91-229, Section 91.205 (VFR/IFR Equipment Requirements)

1.5 The FAA Act of 1958, Section 611(b).

1.6 Date of Application for: ASW 27 Type Certificate June 5, 1994.
German Type Certificate No. 389 for ASW 27 issued January 21, 1997.

Import Requirements.

A U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Luftfahrt-Bundesamt (LBA) containing the following statement: "The aircraft covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate G05CE and is in condition for safe operation."

Model ASW 27 serial numbers are eligible for US Standard Airworthiness Certificate when:

1) The FAA inspector is provided with the original export Certificate of Airworthiness issued by the Luftfahrt-Bundesamt (LBA), which certifies the glider conforms to the foreign type certificate, and
2) The glider is found to be in condition for safe operation by the FAA inspector. ASW 27 eligible serial numbers are: 27002, 27004, 27007, 27009, 27019, 27029, 27031, 27034, 27035, 27037 and subsequent.

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. Minimum Equipment:

1 Airspeed indicator up to 300 km/h range
1 Altimeter
1 Magnetic direction indicator (Compass)
1 Four part safety harness (Symmetric)
1 Parachute or back cushion (at least 3.25 in. (8 cm) thick when compressed)
1 Schleicher ASW 27 Flight manual, LBA approved January 20, 1997

Service Information.

"Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is LBA approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only."

NOTES

NOTE 1. Current weight and balance data together with list of equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each glider at the time of original certification.

NOTE 2. The placards listed in ALEXANDER SCHLEICHER ASW 27 Instructions for Continued Airworthiness Manual must be displayed in the locations defined.

NOTE 3. The ASW 27 Flight Manual, dated January, 1997 is FAA approved. Airworthiness limitations contained there-in may not be changed without FAA approval.

Instructions for Continued Airworthiness are FAA-approved. They specify mandatory replacement times, and structural repair procedures. The airworthiness Limitations contained there-in may not be changed without FAA approval.

NOTE 4. All external portions of the glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.

NOTE 5. Major structural repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work, in accordance with Alexander Schleicher Instructions for Continued Airworthiness.

NOTE 6. Information essential for the proper operation, maintenance and Inspection of the ASW 27 glider is contained in the appropriate Alexander Schleicher Flight Manual and Instructions for Continued Airworthiness.

NOTE 7. The sailplane is suitable for semi-acrobatics in accordance with the data in the Flight Manual.

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